

Claims

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A slitter apparatus comprising:
  - a first semi-circular member having first and second mating surfaces;
  - a second semi-circular member having first and second mating surfaces complimentary to the opposed first and second mating surfaces of the first member;
  - wherein the first member is engageable with the second member to form on engagement a cylindrical body;
  - a first rectangular land having a plurality of sidewall surfaces projecting from one of the first or second mating surfaces of the first member wherein the corners formed between adjacent sidewall surfaces of the first rectangular land are radiused;
  - a first rectangular recess having a plurality of sidewall surfaces projecting into one of the first or second mating surfaces of the second member;
  - wherein the first rectangular recess is interengageable with the first rectangular land to provide axial and radial alignment of the first member with the second member.

2. The slitter apparatus of claim 1 wherein the corners formed between adjacent sidewall surfaces of the first rectangular recess are radiused.

3. The slitter apparatus of claim 2 wherein the radius of each corner formed between adjacent sidewall surfaces of the first rectangular recess is less than the radius of the corresponding corner formed between adjacent

5 sidewall surfaces of the first rectangular land.

1 4. The slitter apparatus of claim 1 wherein the  
2 corners formed between adjacent sidewall surfaces of the  
3 first rectangular recess are chamfered.

1 5. The slitter apparatus of claim 1 further  
2 comprising:

3 a second rectangular land having a plurality of  
4 sidewall surfaces projecting from the other of the first or  
5 second mating surfaces of the first member wherein the  
6 corners formed between adjacent sidewall surfaces of the  
7 second rectangular land are radiused;

8 a second rectangular recess having a plurality of  
9 sidewall surfaces projecting into the other of the first or  
10 second mating surfaces of the second member;

11 wherein the second rectangular recess is  
12 interengageable with the second rectangular land to provide  
13 axial and radial alignment of the first member with the  
14 second member.

1 6. The slitter apparatus of claim 5 wherein the  
2 first rectangular land is interengageable with the first  
3 rectangular recess, and further wherein the first  
4 rectangular land is not interengageable with the second  
5 rectangular recess, whereby the first and second semi-  
6 circular members may be connected together only in one way  
7 to form the cylindrical body.

1 7. The slitter apparatus of claim 1 further  
2 comprising:

3 a second rectangular land having a plurality of  
4 sidewall surfaces projecting from the other of the first or  
5 second mating surfaces of the second member wherein the  
6 corners formed between adjacent sidewall surfaces of the

second rectangular land are radiused;

a second rectangular recess having a plurality of sidewall surfaces projecting into the other of the first or second mating surfaces of the first member;

wherein the second rectangular recess is interengageable with the second rectangular land to provide axial and radial alignment of the first member with the second member.

8. The slitter apparatus of claim 1 wherein the first rectangular land is centrally disposed inward from the outer edges of the mating surface from which it projects and further wherein the first rectangular recess is centrally disposed inward from the outer edges of the mating surface into which it projects such that upon engagement of the first member with the second member, the first rectangular land and the first rectangular recess are completely enclosed inside of the cylindrical body.

9. The slitter apparatus of claim 1 wherein the first land is integral with the mating surface from which it projects.

10. A slitter apparatus comprising:

a first semi-circular member having a first mating surface;

a second semi-circular member having a second mating surface engageable with the first mating surface to form a cylindrical body;

a rectangular land projecting from the first mating surface of the first semi-circular member wherein the land includes no more than one planar surface substantially parallel to the first mating surface; and

a rectangular recess protruding into the

13 second mating surface of the second semi-circular  
14 member wherein the recess includes no more than one  
15 planar surface substantially parallel to the second  
16 mating surface and further wherein engagement of the  
17 land with the recess provides both axial and radial  
18 alignment of the first semi-circular member with the  
19 second semi-circular member.

1 11. The slitter apparatus of claim 10 wherein the  
2 land includes a plurality of sidewall surfaces projecting  
3 from the first mating surface wherein the corners formed  
4 between adjacent sidewall surfaces of the rectangular land  
5 are chamfered.

1 12. The slitter apparatus of claim 11 wherein the  
2 recess includes a plurality of sidewall surfaces projecting  
3 into the second mating surface wherein the corners formed  
4 between adjacent sidewall surfaces of the rectangular recess  
5 are chamfered.

1 13. The slitter apparatus of claim 12 wherein the  
2 length of the chamfer on each corner formed between adjacent  
3 sidewall surfaces of the rectangular recess is less than the  
4 length of the chamfer on the corresponding corner formed  
5 between adjacent sidewall surfaces of the rectangular land.

1 14. The slitter apparatus of claim 10 wherein the  
2 land includes a plurality of sidewall surfaces projecting  
3 from the first mating surface wherein the corners formed  
4 between adjacent sidewall surfaces of the rectangular land  
5 are radiused.

1 15. The slitter apparatus of claim 14 wherein the  
2 recess includes a plurality of sidewall surfaces projecting  
3 into the second mating surface wherein the corners formed

20250416 094404

4 between adjacent sidewall surfaces of the rectangular recess  
5 are radiused.

1 16. The slitter apparatus of claim 15 wherein the  
2 radius of each corner formed between adjacent sidewall  
3 surfaces of the rectangular recess is less than the radius  
4 of the corresponding corner formed between adjacent sidewall  
5 surfaces of the rectangular land.

1 17. The slitter apparatus of claim 10 wherein the  
2 rectangular land is centrally disposed on the first mating  
3 surface and the rectangular recess is centrally disposed in  
4 the second mating surface.

1 18. The slitter apparatus of claim 10 wherein  
2 rectangular land is integral with the first mating surface.

1 19. A slitter apparatus comprising:  
2 a first semi-circular member having a first  
3 mating surface;  
4 a second semi-circular member having a second  
5 mating surface engageable with the first mating surface  
6 to form a cylindrical body;  
7 a land projecting from the first mating  
8 surface wherein the land is centrally disposed inward  
9 from the outer edges of the first mating surface such  
10 that upon engagement of the first semi-circular member  
11 with the second semi-circular member, the land is  
12 hidden inside of the cylindrical body;  
13 a recess projecting into the second mating  
14 surface wherein the recess is centrally disposed inward  
15 from the outer edges of the second mating surface such  
16 that upon engagement of the first semi-circular member  
17 with the second semi-circular member, the recess is  
18 hidden inside of the cylindrical body;

400316-00404

19                wherein the land includes a first pair of  
20 planar alignment surfaces;

21                wherein the recess includes a second pair of  
22 planar alignment surfaces complimentary to the first  
23 pair of planar alignment surfaces wherein contact of  
24 the first pair of planar alignment surfaces with the  
25 second pair of planar alignment surfaces when the land  
26 is received in the recess provides axial alignment of  
27 the first semi-circular member with the second semi-  
28 circular member;

29                wherein the land includes a third pair of  
30 planar alignment surfaces; and

31                wherein the recess includes a fourth pair of  
32 planar alignment surfaces complimentary to the third  
33 pair of planar alignment surfaces wherein contact of  
34 the third pair of planar alignment surfaces with the  
35 fourth pair of planar alignment surfaces when the land  
36 is received in the recess provides radial alignment of  
37 the first semi-circular member with the second semi-  
38 circular member.

TOP SECRET